DOCKET NO.: CELL-0145 Application No.: 09/964,161 Office Action Dated: May 5, 2004

This listing of claims will replace all prior versions, and listings, of claims in the application.

## **Listing of Claims:**

1. (currently amended) A compound of formula (1):

$$R^{1}(Alk^{1})_{r}(L^{1})_{s}$$
 $(Alk^{2})_{m}$ 
 $C(R^{2})$ 
 $R^{b}$ 
 $R^{a}$ 
 $C(R^{2})$ 
 $C(R^{3})$ 
 $C(R^{3})$ 

wherein:

R is a carboxylic acid group or an ester or amide derivative thereof;

 $R^1$  is  $C_6$ - $C_{12}$  aromatic group or a  $C_1$ - $C_9$  heteroaromatic group containing one, two, three, or four heteroatoms selected from oxygen, sulfur, or nitrogen,  $R^1$  being optionally substituted with one, two or three  $-L_2(CH_2)_pL_3(R^c)_q$  atoms or groups;

Alk<sup>1</sup> is an optionally substituted aliphatic or heteroaliphatic chain;

L<sup>1</sup> is a linker atom or group selected from the group consisting of -O-, -S-, -C(O)-, -C(O)O-, -C(S)-, -S(O)-, -S(O)<sub>2</sub>-, -N(R<sup>4</sup>)-, -OC(O)N(R<sup>4</sup>)-, -CSN(R<sup>4</sup>)-, --C(O)N(R<sup>4</sup>)-, -N(R<sup>4</sup>)CO-, -N(R<sup>4</sup>)CO-, -N(R<sup>4</sup>)CS-, -S(O)N(R<sup>4</sup>)-, -S(O)<sub>2</sub> N(R<sup>4</sup>)-, -N(R<sup>4</sup>)S(O)-,

 $-N(R^4)S(O)_2\text{-,} -N(R^4)CON(R^4)\text{-,} -N(R^4)CSN(R^4)\text{-,} -N(R^4)SON(R^4)\text{- and} -N(R^4)SO_2 \ N(R^4)\text{-;}$ 

r and s, which may be the same or different, is each zero or an integer 1;

 $R^a$  and  $R^b$ , which may be the same or different, is each an atom or group --  $L^2(CH_2)_pL^3(R^c)_q$ ; n which

L<sup>2</sup> and L<sup>3</sup> is each a covalent bond,

p is zero or the integer 1,

q is an integer 1, 2 or 3, and

 $R^c$  is a hydrogen or halogen atom or a group selected from straight or branched alkyl,  $OR^d$ ,  $-SR^d$ ,  $-NR^dR^e$ ,  $-NO_2$ , -CN,  $-CO_2R^d$ ,  $-SO_3H$ ,  $SO_2R^d$ ,  $-OCO_2R^d$ ,  $-CONR^dR^e$ ,  $-CONR^dR^e$ ,  $-CONR^dR^e$ ,  $-COR^d$ ,  $-N(R^d)COR^e$ ,  $-N(R^d)CSR^e$ ,  $-SO_2N(R^d)(R^e)$ ,  $-N(R^d)SO_2R^e$ ,  $-N(R^d)CONR^eR^f$ ,  $-N(R^d)CSNR^eR^f$  or  $-N(R^d)SO_2NR^eR^f$ ;

DOCKET NO.: CELL-0145 Application No.: 09/964,161 Office Action Dated: May 5, 2004

R<sup>d</sup>, R<sup>e</sup>, and R<sup>f</sup> are each, independently, a hydrogen atom or <del>an optionally substituted</del> <u>a</u> straight or branched alkyl group;

Alk<sup>2</sup> is a straight or branched alkylene chain;

m is zero or an integer 1;

R<sup>2</sup> is a hydrogen atom or methyl group;

R<sup>3</sup> and R<sup>4</sup>, which may be the same or different, are each a hydrogen atom or a straight or branched alkyl group;

Het is an optionally substituted nine-to thirteen-membered fused-ring heteroaromatic group a nine- to thirteen-membered fused-ring heteroaromatic group selected from the group consisting of benzofuryl, [2,3-dihydro]-benzofuryl, benzothienyl, benzotriazolyl, indolyl, isoindolyl, benzimidazolyl, imidazo[1,2-a]pyridyl, benzothiazolyl, benzoxazolyl, benzopyranyl, [3,4-dihydro]benzopyranyl, quinazolinyl, naphthyridinyl, pyrido[3,4b]pyridyl, pyrido[3,2-b]pyridyl, pyrido[4,3-b]pyridyl, quinolinyl, isoquinolinyl, tetrazolyl, 5,6,7,8-tetrahydroguinolinyl, 5,6,7,8-tetrahydroisoguinolinyl, and imidyl, any of which groups may be optionally substituted by one, two or three substituents R<sup>6</sup> in which R<sup>6</sup> is -R<sup>6a</sup> or -Alk<sup>3</sup>(R<sup>6a</sup>)<sub>m</sub>, where R<sup>6a</sup> is a halogen atom, amino, nitro, cyano, amidino, hydroxyl, formyl, carboxyl, esterified carboxyl, thiol, -COR<sup>7</sup>, -CSR<sup>7</sup>, -SO<sub>3</sub>H, -SO<sub>2</sub>R<sup>7</sup> -SO<sub>2</sub>NH<sub>2</sub>, -SO<sub>2</sub>NHR<sup>7</sup>, - $SO_2N(R^7)_2$ ,  $-CONH_2$ ,  $-CSNH_2$ ,  $-CONHR^7$ ,  $-CSNHR^7$ ,  $-CON(R^7)_2$ ,  $-CSN(R^7)_2$ ,  $-N(R^4)SO_2R^7$ ,  $-N(SO_2R^7)_2$ ,  $-NH(R^4)SO_2NH_2$ ,  $-N(R^4)SO_2NHR^7$ ,  $-N(R^4)SO_2N(R^7)_2$ ,  $-N(R^4)COR^7$ , - $N(R^4)CON(R^7)_2$ ,  $-N(R^4)CSN(R^7)_2$ ,  $-N(R^4)CSR^7$ ,  $-N(R^4)C(O)OR^7$ ,  $-SO_2$  NHet<sup>1</sup>,  $-CONHet^1$ , -CSNHet<sup>1</sup>, -N(R<sup>4</sup>)SO<sub>2</sub>NHet<sup>1</sup>, -N(R<sup>4</sup>)CONHet<sup>1</sup>, -N(R<sup>4</sup>)CSNHet<sup>1</sup>, -SO<sub>2</sub>N(R<sup>4</sup>)Het<sup>2</sup>, -CON(R<sup>4</sup>)Het<sup>2</sup>, -CSN(R<sup>4</sup>)Het<sup>2</sup>, -N(R<sup>4</sup>)CON(R<sup>4</sup>)Het<sup>2</sup>, -N(R<sup>4</sup>)CSN(R<sup>4</sup>)Het<sup>2</sup>, aryl or heteroaryl group;

-NHet<sup>1</sup> is a  $C_{5-7}$  cyclicamino group optionally additionally containing one or more -O-or -S- atoms or -N(R<sup>4</sup>)-, -C(O)- or -C(S)- groups;

Het<sup>2</sup> is a monocyclic  $C_{5-7}$  carbocyclic group optionally containing one or more -O- or -S- atoms or -N(R<sup>4</sup>)-, -C(O)- or -C(S)- groups;

 $R^7$  is an -Alk<sup>3</sup>( $R^{6a}$ )<sub>m</sub>, aryl or heteroaryl,

Alk<sup>3</sup> is a straight or branched  $C_{1-6}$  alkylene,  $C_{2-6}$  alkenylene or  $C_{2-6}$  alkynylene chain, optionally interrupted by one, two or three -O- or -S- atoms or -S(O)<sub>n</sub>, or -N(R<sup>8</sup>)- groups;

 $R^8$  is a hydrogen atom or  $C_{1-6}$  alkyl;

**PATENT** 

DOCKET NO.: CELL-0145 Application No.: 09/964,161 Office Action Dated: May 5, 2004

n is an integer 1 or 2,

m is zero or an integer 1, 2 or 3;

and the salts, solvates, hydrates, and N-oxides thereof.

## 2-3. (canceled)

- 4. (previously presented) The compound of Claim 1 wherein R is a  $-\text{CO}_2\text{H}$  group.
- 5. (previously presented) The compound of Claim 1 wherein  $Alk^2$  is a --CH<sub>2</sub> -- chain and m is the integer 1.
- 6. (previously presented) The compound of Claim 1 wherein each of R<sup>2</sup> and R<sup>3</sup> is a hydrogen atom.

## 7. (canceled)

- 8 (currently amended) The compound of Claim 1 wherein  $R^1$  is an optionally substituted phenyl, pyridyl, or pyrimidinyl group, each of which can be optionally substituted with one, two or three  $-L_2(CH_2)_pL_3(R^c)_q$  atoms or groups.
- 9. (previously presented) The compound of Claim 1 wherein  $-(Alk^1)_r(L^1)_s$  is a  $-CH_2O_-$ ,  $-SO_2NH_-$ ,  $-C(O)O_-$ , or  $-CON(R^4)$  group.
- 10. (previously presented) The compound of Claim 9 wherein  $-(Alk^1)_r(L^1)_s$  is a -CONH group.
  - 11 (previously presented) The compound of Claim 1 which has the formula (1a):

**PATENT** 

**DOCKET NO.:** CELL-0145 **Application No.:** 09/964,161 **Office Action Dated:** May 5, 2004

wherein -W= is -CH= or -N=,  $R^9$  and  $R^{10}$ , which may be the same or different is each a  $-L^2(CH_2)_pL^3(R^c)_q$  atom or group, and the salts, solvates, hydrates and N-oxides thereof.

## 12-13. (canceled)

14. (previously presented) A pharmaceutical composition comprising a compound of Claim 1 together with one or more pharmaceutically acceptable carriers, excipients or diluents.